WEST Search History

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DATE: Sunday, June 18, 2006

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☐	L6	L5 not l4	9
☐	L5	L2 and adiabatic	14
☐	L4	L3 and adiabatic	5
☐	L3	L2 and fixed bed	10
☐	L2	L1 and heat exchang$3 with coolant	62
☐	L1	(synthesis gas or hydrogen near2 carbon oxides) same methanol	3906

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NEWS 4	FEB 21	STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results
NEWS 5	FEB 22	The IPC thesaurus added to additional patent databases on STN
NEWS 6	FEB 22	Updates in EPFULL; IPC 8 enhancements added
NEWS 7	FEB 27	New STN AnaVist pricing effective March 1, 2006
NEWS 8	MAR 03	Updates in PATDPA; addition of IPC 8 data without attributes
NEWS 9	MAR 22	EMBASE is now updated on a daily basis
NEWS 10	APR 03	New IPC 8 fields and IPC thesaurus added to PATDPAFULL
NEWS 11	APR 03	Bibliographic data updates resume; new IPC 8 fields and IPC thesaurus added in PCTFULL
NEWS 12	APR 04	STN AnaVist $500 visualization usage credit offered
NEWS 13	APR 12	LINSPEC, learning database for INSPEC, reloaded and enhanced
NEWS 14	APR 12	Improved structure highlighting in FQHIT and QHIT display in MARPAT
NEWS 15	APR 12	Derwent World Patents Index to be reloaded and enhanced during second quarter; strategies may be affected
NEWS 16	MAY 10	CA/CAplus enhanced with 1900-1906 U.S. patent records
NEWS 17	MAY 11	KOREAPAT updates resume
NEWS 18	MAY 19	Derwent World Patents Index to be reloaded and enhanced
NEWS 19	MAY 30	IPC 8 Rolled-up Core codes added to CA/CAplus and USPATFULL/USPAT2
NEWS 20	MAY 30	The F-Term thesaurus is now available in CA/CAplus
NEWS 21	JUN 02	The first reclassification of IPC codes now complete in INPADOC

NEWS EXPRESS	JUNE 16 CURRENT WINDOWS VERSION IS V8.01b, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 23 MAY 2006.
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                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.06       0.27

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FILE LAST UPDATED: 16 Jun 2006  (20060616/ED)

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=> s (synthesis gas or syngas or hydrogen (2a) carbon oxide?) (p) methanol
      1250407 SYNTHESIS
            3 SYNTHESISES
        66980 SYNTHESES
            1 SYNTHESESES
      1287990 SYNTHESIS
                (SYNTHESIS OR SYNTHESISES OR SYNTHESES OR SYNTHESESES)
      1503945 GAS
       508881 GASES
      1685088 GAS
                (GAS OR GASES)
        16624 SYNTHESIS GAS
                (SYNTHESIS(W)GAS)
         3979 SYNGAS
           14 SYNGASES
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          3984 SYNGAS
                 (SYNGAS OR SYNGASES)
        927455 HYDROGEN
          5776 HYDROGENS
        930689 HYDROGEN
                 (HYDROGEN OR HYDROGENS)
       1197876 CARBON
         26137 CARBONS
       1207234 CARBON
                 (CARBON OR CARBONS)
       1755903 OXIDE?
          9403 CARBON OXIDE?
                 (CARBON(W)OXIDE?)
        193694 METHANOL
           691 METHANOLS
        194059 METHANOL
                 (METHANOL OR METHANOLS)
L1        2543 (SYNTHESIS GAS OR SYNGAS OR HYDROGEN (2A) CARBON OXIDE?) (P)
               METHANOL

=> s l1 and heat exchang?
       1280399 HEAT
         55241 HEATS
       1295144 HEAT
                 (HEAT OR HEATS)
        683115 EXCHANG?
         67434 HEAT EXCHANG?
                 (HEAT(W)EXCHANG?)
L2         103 L1 AND HEAT EXCHANG?

=> s l2 and fixed bed
        228818 FIXED
             1 FIXEDS
        228819 FIXED
                 (FIXED OR FIXEDS)
        164690 BED
         65860 BEDS
        188534 BED
                 (BED OR BEDS)
         19967 FIXED BED
                 (FIXED(W)BED)
L3           3 L2 AND FIXED BED

=> s l2 and coolant
         35231 COOLANT
         13991 COOLANTS
         40735 COOLANT
                 (COOLANT OR COOLANTS)
L4           3 L2 AND COOLANT

=> s l3 or l4
L5           5 L3 OR L4

=> d l5 ibib ab 1-5

L5   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2005:558822  CAPLUS
DOCUMENT NUMBER:          143:155677
TITLE:                    Method for catalytic synthesis of dimethyl ether in
                          combined bed reactor
INVENTOR(S):              Ying, Weiyong; Fang, Dingye; Zhang, Haitao; Liu,
                          Dianhua; Cao, Fahai
PATENT ASSIGNEE(S):       East China University of Science and Technology, Peop.
                          Rep. China
```

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1413974	A	20030430	CN 2002-136724	20020829
PRIORITY APPLN. INFO.:			CN 2002-136724	20020829

AB Di-Me ether is synthesized by reaction of **syngas** in (medical) liquid paraffin in the presence of catalyst in a three-phase slurry-bed/ **fixed-bed** combined reactor at 220-280° and 3.0-7.0 MPa. The **syngas** is prepared from natural gas or coal. The catalyst is composed of Cu series **methanol** synthesis catalyst and modified mol. sieve (ratio 0.4-2.0:1). The combined reactor consists of a reactor body that is divided into a three-phase slurry bed section and a **fixed bed** section, a **heat exchanger**, a gas distributing unit, a gas pocket, and a separator between reactor sections.

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:633898 CAPLUS
DOCUMENT NUMBER: 141:158961
TITLE: Hydrogenation process for **methanol** manufacture from **synthesis gas**
INVENTOR(S): Fitzpatrick, Terence James
PATENT ASSIGNEE(S): Johnson Matthey Plc, UK
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2004065341	A1	20040805	WO 2004-GB75		20040112
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ					
AU 2004205368	A1	20040805	AU 2004-205368		20040112
CN 1741978	A	20060301	CN 2004-80002577		20040112
US 2006074133	A1	20060406	US 2005-542819		20050720
PRIORITY APPLN. INFO.:			GB 2003-1323	A	20030121
			WO 2004-GB75	W	20040112

AB **Methanol** is synthesized from pre-heated **methanol synthesis gas** in one or more adiabatic synthesis stages with cooling of the resultant gas after each stage. Further **methanol** synthesis is then effected on the resultant, partially reacted **synthesis gas** in a bed of synthesis catalyst cooled by means of a **coolant** flowing concurrently through tubes disposed in the catalyst bed. After cooling, **methanol** is separated from the unreacted gas. Part of the unreacted gas is combined with make-up gas and used as the **coolant** fed to the aforesaid tubes, thus producing the pre-heated **synthesis gas** to be fed to the adiabatic synthesis stages. A process flow diagram is presented.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:8371 CAPLUS

DOCUMENT NUMBER: 138:340592
TITLE: Synthesis Gas Production in a Forced Unsteady-State Reactor Network
AUTHOR(S): Fissore, Davide; Barresi, Antonello A.; Baldi, Giancarlo
CORPORATE SOURCE: Dipartimento di Scienza dei Materiali ed Ingegneria Chimica, Politecnico di Torino, Turin, 10129, Italy
SOURCE: Industrial & Engineering Chemistry Research (2003), 42(12), 2489-2495
CODEN: IECRED; ISSN: 0888-5885
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The feasibility of producing **synthesis gas** by the combination of partial oxidation and steam reforming of natural gas on a Pt-based catalyst in forced unsteady-state catalytic reactors was considered by numerical simulations. A network of three reactors with periodical change of the feed position was investigated as an alternative to the well-investigated reverse-flow reactor: these modes of reactor operation may lead to lower **syngas** manufacturing costs than the conventional unidirectional **fixed-bed** reactor because external **heat exchangers** are no longer required. A cyclic steady-state condition and autothermal behavior can be obtained by feeding low-temperature reactants. The influence of the main operating parameters (inlet temperature, switching time, inlet flow rate, and composition) on the performance of the device was investigated, proving that the network can be competitive with traditional technologies, allowing for higher reactant conversion and product selectivity. The possibility of tailoring the H2/CO ratio to the value required for the production of **methanol** or Fischer-Tropsch synthesis was addressed.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:753188 CAPLUS
DOCUMENT NUMBER: 131:338608
TITLE: **Methanol** manufacture from **synthesis gas** made by steam reforming of hydrocarbons using indirect **heat exchange**
INVENTOR(S): Fitzpatrick, Terence James
PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9959945	A1	19991125	WO 1999-GB1335	19990429
W: AU, BR, CA, GE, ID, JP, KR, MX, NO, UA, US, UZ, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2330298	AA	19991125	CA 1999-2330298	19990429
AU 9937207	A1	19991206	AU 1999-37207	19990429
AU 740997	B2	20011122		
EP 1080059	A1	20010307	EP 1999-919408	19990429
EP 1080059	B1	20040218		
R: DE, GB, NL				
JP 2002515468	T2	20020528	JP 2000-549565	19990429
US 6387963	B1	20020514	US 2000-714486	20001117

US 6433029	B1	20020813	US 2000-714218		20001117
PRIORITY APPLN. INFO.:			GB 1998-10700	A	19980520
			GB 1998-11355	A	19980528
			GB 1999-4649	A	19990302
			WO 1999-GB1335	W	19990429
			WO 1999-GB1344	A1	19990429

AB **Methanol** is manufactured in high yield and selectivity in a synthesis loop having at least two synthesis stages where **methanol** is prepared from recycled, unreacted gas, optionally together with part of the **synthesis gas**, in one or more synthesis stages to give a stream of reacted gas, **synthesis gas** is then added and prior to separation of the **methanol**, a further amount of **methanol** is synthesized from the resultant mixture in one or more further synthesis stages, with at least the final synthesis stage of the loop being effected via indirect **heat exchange** with pressurized water as the **coolant**. Preferably the pressurized hot water from the final synthesis stage of the loop is employed to saturate a hydrocarbon feedstock (e.g., natural gas) from which the **synthesis gas** is produced by steam reforming. Process flow diagrams are presented.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:635591 CAPLUS
DOCUMENT NUMBER: 111:235591
TITLE: Process and catalyst for the manufacture of **methanol** from **synthesis gas**
INVENTOR(S): Sie, Swan Tiong; Van Dijk, Arjan
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.
SOURCE: Eur. Pat. Appl., 5 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 322989	A2	19890705	EP 1988-203039	19881229
EP 322989	A3	19900207		
R: BE, DE, ES, FR, GB, IT, NL				
JP 01233241	A2	19890919	JP 1988-329577	19881228
ZA 8809668	A	19891129	ZA 1988-9668	19881228
AU 8827563	A1	19890706	AU 1988-27563	19881229
AU 605655	B2	19910117		

PRIORITY APPLN. INFO.: GB 1987-30280 A 19871230

AB MeOH is prepared by the hydrogenation of CO in the presence of a catalyst system prepared by combining a Ni salt with an alkali metal alcoholate or an alkaline earth metal alcoholate. An inert liquid **coolant**, immiscible with MeOH, at 0-70°, is injected into the reaction liquid phase and serves as a **coolant**. The **coolant** (e.g., n-pentane) does not deactivate the catalyst and overcomes the problems of large indirect **heat exchange** surface area requirements by being part of the reaction mixture The **coolant** is removed with the MeOH product by vaporization and recovered from the MeOH by phase separation In this manner, synthesis gas (H/CO volume ratio 2) was converted into MeOH at 120°/15 bar in the presence of a Ni formate-NaH-tert-pentyl alc.-digylme catalyst system and n-pentane (**coolant** liquid hourly space velocity 1000 kg/m3-h), producing a 2-phase product (the upper phase comprising 98% n-pentane and 2% MeOH; the lower phase comprising MeOH 85, n-pentane 5, and H2O 10%) the phases separated, the MeOH removed from the lower phase by distillation, and the n-pentane